



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,553	12/01/2003	Edwin S. Romano	TOR7119	1862
44088	7590	11/28/2006	EXAMINER	
SEAN KAUFHOLD			SAID, MANSOUR M	
P. O. BOX 89626			ART UNIT	
SIOUX FALLS, SD 57109			PAPER NUMBER	
			2629	

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/724,553

Applicant(s)

ROMANO ET AL.

Examiner

MANSOUR M. SAID

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13 is/are allowed.
- 6) ☒ Claim(s) 1,2,5,7-9 and 11 is/are rejected.
- 7) ☐ Claim(s) 3,4,6, 10 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Response to Amendment

- 1. This Office Action is in response to the amendment filed on October 2, 2006.**

Claim Rejections - 35 USC § 103

- 2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dong (6,630,895 B1) in view of Chuang (6,967,831 B2).**

As to claim 1, Dong teaches a computer input (keyboard, (figures 1-3)) and display (display, (figures 1-3, (20)) combination for selectively coupling to a computer (PC, (figure 4)) (column 2, 14-65), an assembly including: a housing having a top wall, a bottom wall, a back wall, a first side wall, a second side wall, and a front wall (figures 1-3); a processor (USB interface control circuit, (figure 4)) being mounted within said housing (figure 4, column 1, lines 40-45 and column 2, lines 20-25); an actuator being electrically coupled to said processor for selectively supplying electricity to processor (figures 1-4 and column 2, lines 2-29 and column 2, lines 60-65); a plurality of keys defining a computer keyboard (figures 1-3) being positioned in said top wall and being substantially flush with said top wall (figures 1-3, column 2, lines 30-41) , each of said keys being electrically coupled to said processor (figures 1-4, column 2, lines 40-

Art Unit: 2629

45, column 2, lines 20-25 and column 2, lines 60-65); a display (display, (figures 1-4, (20)) being mounted in said top wall (column 2, lines 29-36) and being substantially flush with said top wall (column 2, lines 29-36), said display (display, (figures 1-4, (20)) being electrically coupled to said processor (USB interface control circuit, (figure 4)) (column 1, lines 40-45 and column 2, lines 15-28); an interface being electrically coupled to said processor and selectively coupled to the computer for communication between said processor and the computer (figure 4 and column 2, lines 15-30); and wherein input from said plurality of keys may be received by said computer and a video signal received from the computer may be displayed on said display (figures 1-4, column 1, lines 40-59 and column 2, lines 15-65).

Dong does not expressly disclose each of said keys comprising a touch sensitive key and said housing having a height from said top wall to said bottom wall less than 2 ½ inches.

However, Chuang teaches a keyboard having a touch pad keys (figures 7-9 and column 3, 15-63), furthermore, Chuang fairly teaches a keyboard housing having a height less than a 2 ½ inches (keyboard, (3, 5 & 7-8)) is a flat keyboard, which can folded and insert into a pocket of the user (figures 3-8 and column 2, lines 30-36 and column 5, lines 30-31).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to incorporate Chuang's keyboard having a touch keys and a flat housing into Dong's keyboard so as to provide a foldable keyboard employing touch panel, which has compact size and comes in handy (column 2, lines 1-5).

Dong and Chuang don't disclose a keyboard's housing having a height a specific size, such as, less than 2 ½ inches.

Art Unit: 2629

However, it is a design choice to make a keyboard height having less than 2 1/2 inches, unless it shows such specific size/height is an advantage feature, so as to increase the versatility of the input device.

A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

4. Claims 2, 5, 7-9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dong in view of Chuang as applied to claim 1 above, and further in view of Ozolins (2004/0100447 A1).

As to claims 2, 5, 7-9 and 11, Dong and Chuang disclose all claimed limitations except that LCD display, foot pads being attached to said bottom wall, and light emitters being mounted within said housing, and said apertures being positioned adjacent to said sound emitter.

However, disclose touch sensitive key (figures 1 & 3, column 2, paragraph 0015 and column 7, paragraph 0067), LCD display (column 2, paragraph 0015), foot pads being attached to said bottom wall (devices attached to or integrated with the keyboard, (column 2, paragraph 0015)), column 4, paragraph 0032 and column 6, paragraph 0056), and light emitters being mounted within said housing (column 8, paragraph 0074, and said apertures (figures 1 & 3, (102)) being positioned adjacent to said sound emitter (figures 1 & 3 and column 5, paragraph 0049).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Ozolins's keyboard having different feature into Dong's

Art Unit: 2629

keyboard so as to perform a controller function of proving signals relating to the state of the switches to couple computers or other devices (column 0010, paragraph 0010).

Allowable Subject Matter

5. **Claim 13 allowed.**

The following is an examiner's statement of reasons for allowance: **Claim 13** is allowed since certain key features of the claimed invention are not taught or fairly suggested by prior art “a plurality of light emitters being mounted within said housing, each of said light emitters being mounted adjacent to one of said keys, each of said light emitters being electrically coupled to said processor, each of said light emitters comprising a light-emitting diode; a control being electrically coupled to said microprocessor for selectively altering a luminosity of said light emitters, said control being mounted on said housing; a display being mounted in said top wall and being substantially flush with said top wall, said display being electrically coupled to said processor, said display comprising a liquid crystal display, said display being backlit, said display being positioned between said plurality of keys and said back wall; a sound emitter being mounted within said housing and being electrically coupled to said processor, said top wall having a grouping of apertures extending there-through, said apertures being positioned adjacent to said sound emitter; a touch pad being mounted in said top wall, said touch pad being operationally coupled to the processor, said touch pad being positioned between said plurality of keys and said front wall; an interface being electrically coupled to said processor and selectively coupled to the computer for communication between said processor and the

Art Unit: 2629

computer, said interface including a first transceiver and a second transceiver each adapted for sending and receiving wireless transmissions, said first transceiver being electrically coupled to said processor, said second transceiver being removably electrically coupled to the computer; and input from said plurality of keys and said touch pad being received by said computer, a video signal received from the computer being displayed on said display and a sound signal received from the computer being played by said sound emitter”.

6. Claims 3-4, 6, 10 & 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed 10/2/06 have been fully considered but they are not persuasive. Applicant argued, “the combination cannot be anticipated by the prior art referenced due to lack of motivation”.

However, Examiner respectfully disagrees, both references disclose a computer keyboard, one with touch sensitive keys or touch keys and the other teaches a computer keyboard coupled a display device.

Therefore, the combination all references fairly discloses the claimed limitations, and all references should be taken in combination and not individually. **The Applicant cannot show non-obviousness by attacking references individually where, as here the rejections are based on combination of references. In re Keller, 208 USPQ 871 (CCPA 1981).**

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ouellette et al. (5,581,243) teach a phantom keyboard is formed on a touch sensitive display as an input tool for a computer.

Hiller (6,396,483 B1) teaches a keyboard incorporating multi-function flat-panel input device.

Madsen et al. (2005/0057891 A1) teach a portable computer device.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS OFFICE ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2629

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mansour M. Said whose telephone number is 571-272-7679. The examiner can normally be reached on Monday through Thursday from 8:30-6:00 P.M. The examiner can also be reached on alternate Friday from 8:30 a.m. to 5:00 p.m. EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe whose telephone number is 571-272-7691.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: 571-273-8300 (for Technology Center 2600 only)

Hand-delivered responses should be brought to the Customer Service Window at the Randolph Building, 401, Dulany Street, Alexandria, VA 22314.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/724,553

Page 9

Art Unit: 2629

Mansour M. Said

11/16/06

A handwritten signature in black ink, appearing to read 'R. Hjerpe', with a stylized, cursive script.

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600